

# Hadley Centre MSLP Data Base

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**AOPC Surface Pressure Group Workshop, UEA, Norwich**

**November 20<sup>th</sup>-21<sup>st</sup> 2002**

## **MSLP Land & Island Data Bank**

- **Data bank currently contains some 1196 individual pressure records from land and island locations**
- **The current version of HadSLP uses data from 719 of the above land and island locations**
- **Records cover all or part of the period from 1871 to 1998 on a monthly basis**
- **Quality control efforts should bring some additional station records held in the data bank to a standard which will allow them to be incorporated into new versions of HadSLP**
- **There are about 350 new station time series that are being assessed for inclusion into the data base**

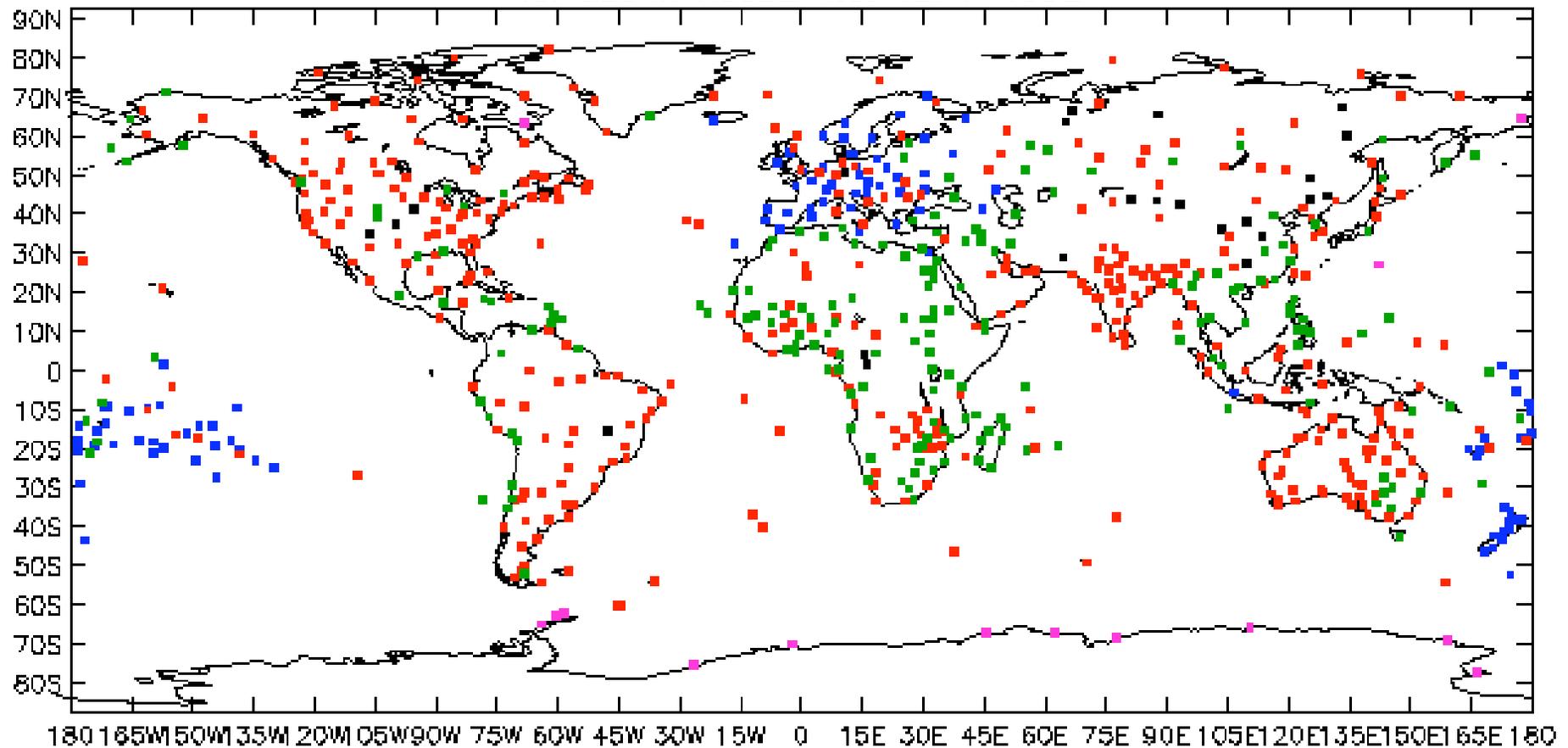
## Pressure Data Sources

- Meteorological Services
- NCDC - GHCN Project
- CLIMAT
- Reseau Mondial, World Weather Records, Monthly Climatic Data for the World, Meteorological Magazine, Meteorological Zeitschrift
- Phil Jones (UEA), Jim Salinger (NIWA), Kenneth Young (Arizona Uni)
- Hildebrandsson, Hahn, De Tillo, Dove, Angot, Walker, Lockyer's
- Board of Trade, UK Royal Engineers & Army Medical Department, Royal Met. Society, French Met. Society, UKMO
- Missionary records, Diaries, British East India Company

# Quality Control of Land & Island Station Data

- Examine metadata to check for potential data discontinuities & problems
- Check for jumps/trends in each time series ('change-point' method of Goosens & Berger, 1986)
- Remove 'outliers' more than 3 standard deviations from mean in each time series
- Visual & objective [using 'Potter' method (Potter, 1981)], checks of each time series against nearest neighbours

### Distribution of New Land Stations and Supplementary Data for use in HadSLP1.0: 1871–1998

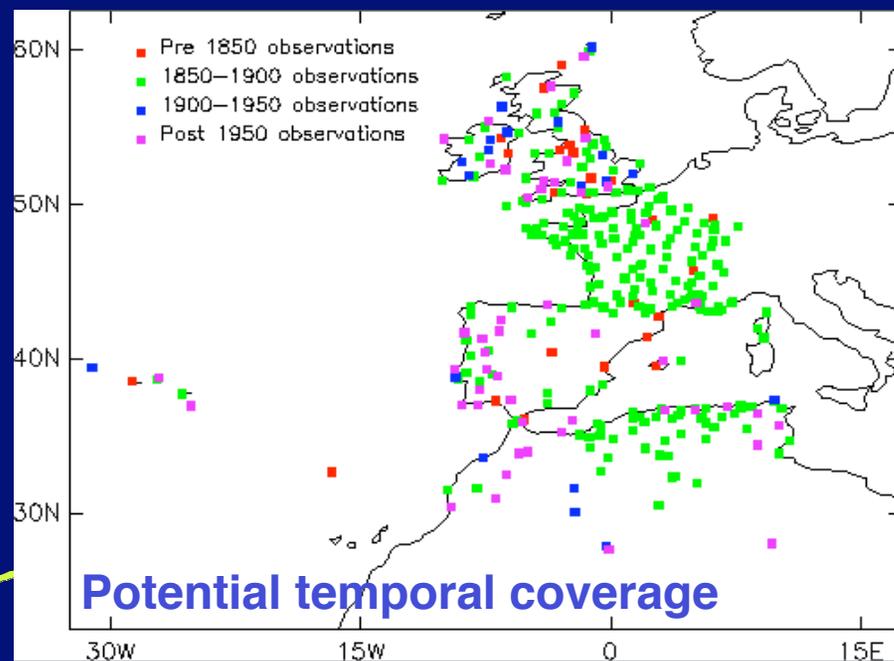
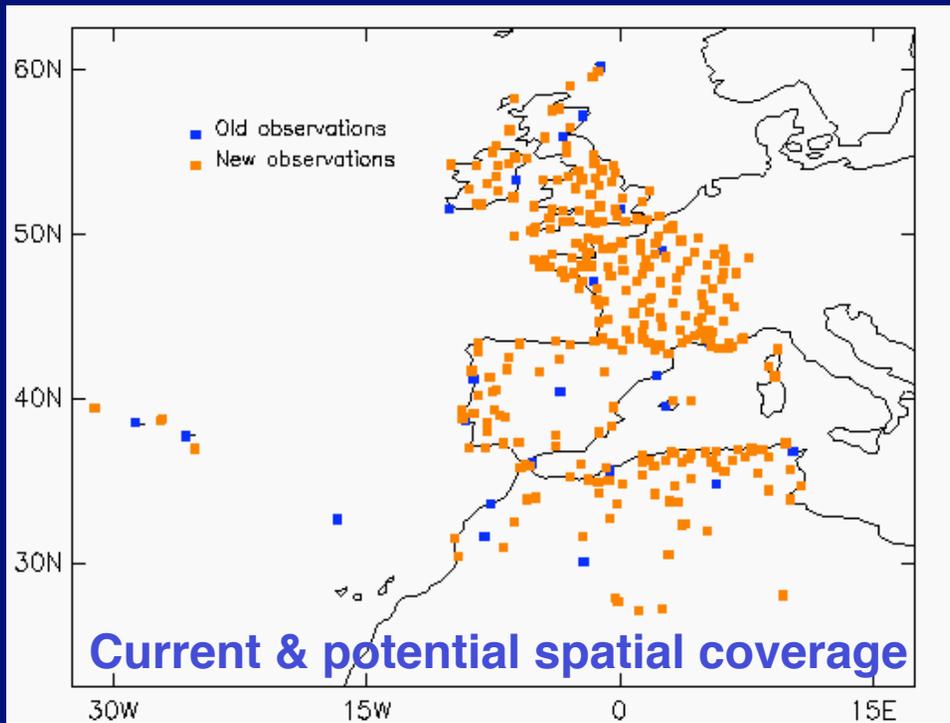


Hadley Centre for Climate Prediction and Research

Plotted 08/04/2002

- [1] GHCN/climat (25)
- [2/3] PJ & MJS (104)
- [4] G21 (384)
- [5] climat (15)
- [6/7/8] Supp G21 (191)

# Potential temporal & spatial data coverage: UK, France, Spain, Portugal & North Africa



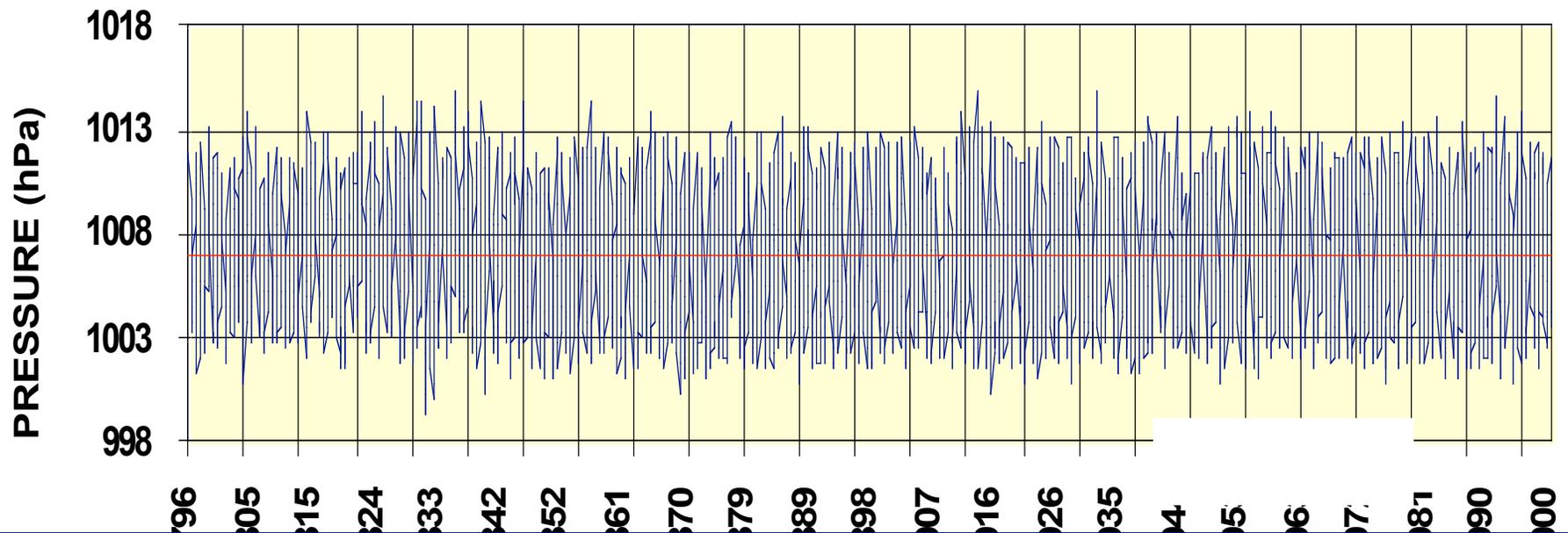
## Current & Future Plans

- Look to increase the data bank holdings, both in terms of the number of records and the length of existing records to match the new marine data from the latest COADS release (I-COADS)
  - Develop the data bank so that it holds the full temporal extent of station records beyond the specific needs of HadSLP
- => eg. long historical records reconstructed from Darwin (1866-present), Jakarta (1841-present), Madras (1796-present) and potentially from Singapore (early 1800s-present)
- Improve and extend historical monthly MSLP time series at key locations used in the construction of the indices such as the Southern and North Atlantic Oscillations (eg. old Tahitian data)

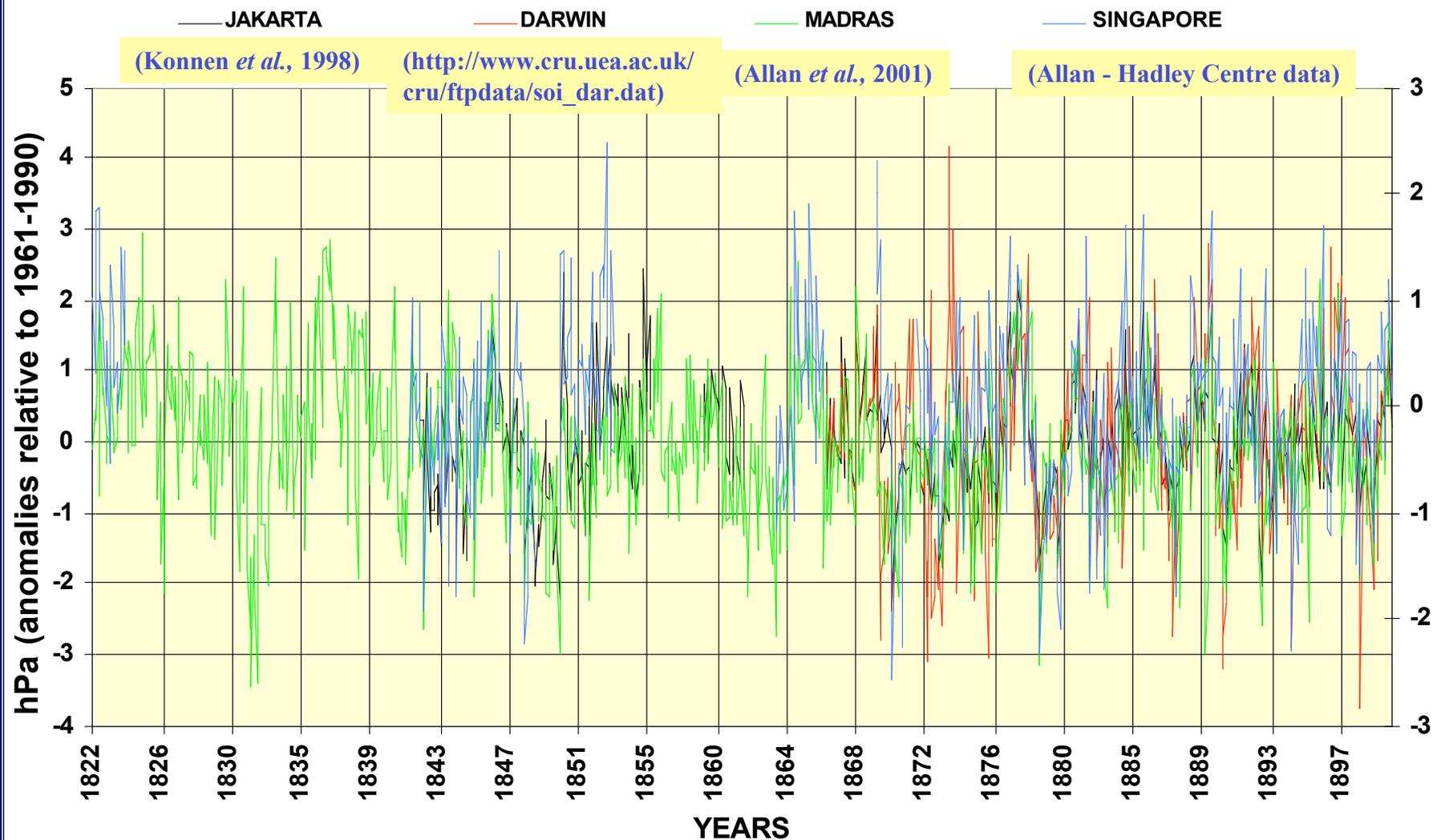
# MADRAS MSLP 1796-2000

(<http://www.cru.uea.ac.uk/cru/data/madrasmstp.htm>)

— MADRAS MSLP  
— Linear (MADRAS MSLP)



# INDO-AUSTRALIAN MEAN SEA LEVEL PRESSURE



## Data Collaborations & Affiliations

- AOPC/OOPC GCOS MSLP Working Group

- EC EMULATE projects

- Links:

  - => Vicky Slonosky (McGill Uni) - intercomparison between Hadley Centre MSLP data sets over the Canadian region

  - => Phil Jones (UEA) - Jakarta, Darwin & Madras MSLP record extensions + Atlantic-European & global pressure data

  - => Jim Salinger (MIWA) - New Zealand & SW Pacific data

  - => Alexey Kaplan (LDEO) - his COADS based MSLP data set

  - => David Wuertz (NCDC) - GHCN pressure data

  - => Gilbert Compo (NOAA) - Hadley Centre historical

**daily** MSLP analyses for the extratropical Northern



# Affiliations & Collaborations

## •Links:

=> Maurizio Maugeri (Milan Uni) - Italian pressure data

=> Volker Wagner (DWD) - German mainland pressure data

=> Ingeborg Auer (ZAMG) - Austrian pressure data

=> Trausti Jonsson (Icelandic Met Office) - Icelandic pressure data

=> Klara Finkele/Tom Sheridan (MET EIREANN) - Irish data